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Parts 1-2
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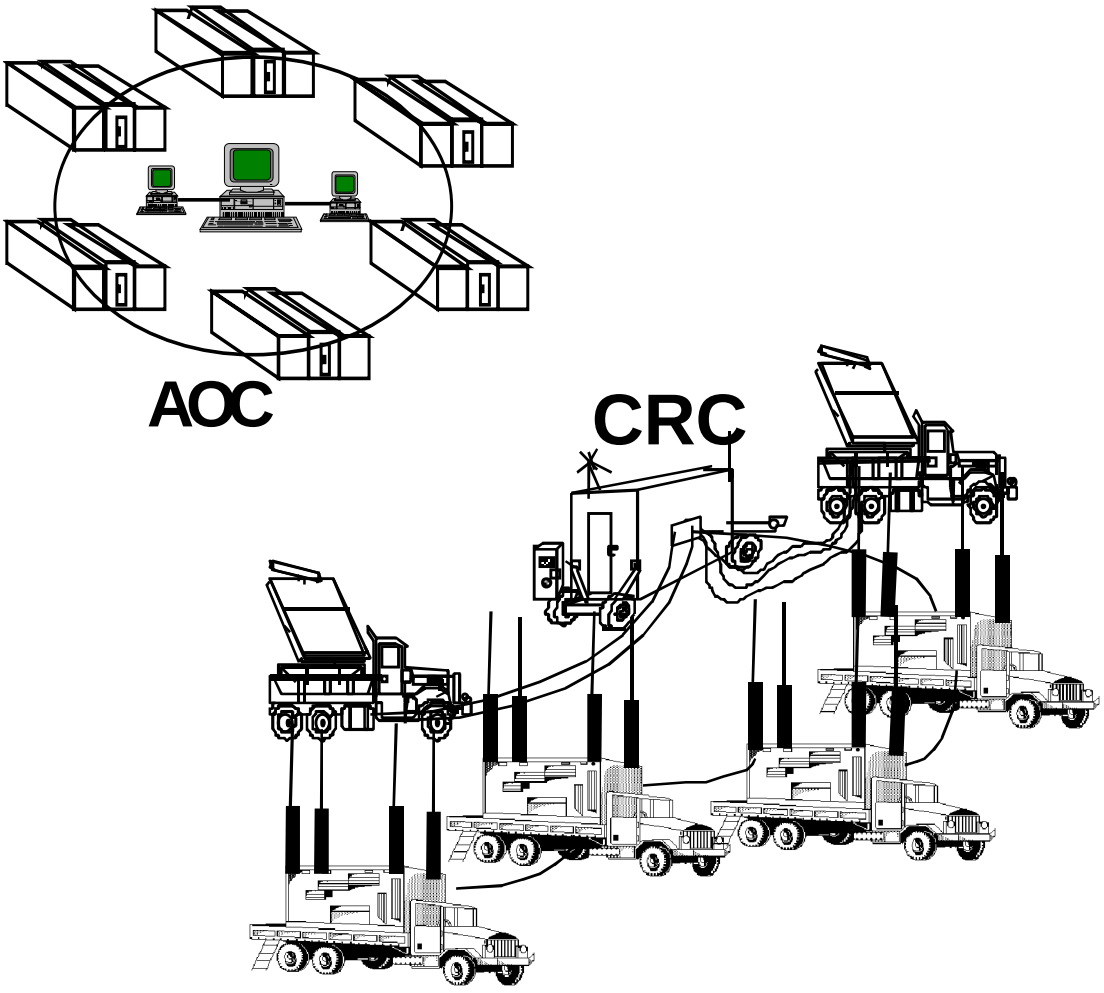
AFSC 1C5X1

AEROSPACE CONTROL AND WARNING SPECIALTY



CAREER FIELD

EDUCATION AND TRAINING PLAN

CAREER FIELD EDUCATION AND TRAINING PLAN
AEROSPACE CONTROL AND WARNING SYSTEMS SPECIALTY
AFSC 1C5X1

TABLE OF CONTENTS

Part I

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AEROSPACE CONTROL AND WARNING SYSTEMS SPECIALTY
AFSC 1C5X1
CAREER FIELD EDUCATION AND TRAINING PLAN

Part I

PREFACE

1. This career field education and training plan (CFETP) is a comprehensive, multipurpose document encapsulating life-cycle training requirements for the 1C5X1 specialty. It outlines a logical growth path (including training resources) and is designed to eliminate duplication and make career field training identifiable, measurable, and budget defensible. **NOTE:** Civilians occupying associated positions will use Part II to support duty position qualification training.

2. The CFETP consists of two parts both of which are used by management to plan, manage, and control training within the career field.

2.1. Part I provides information necessary for overall management of the specialty. It contains administrative details and a specialty description, explains the purpose and use of the CFETP, identifies career field requirements/progression, provides career field information, and documents training decisions. Also, each skill level is defined, known resource constraints are identified, and a complete list of continuation training for the specialty is provided. Note: Part I doesn't replace the specialty description identified in AFMAN 36-2108, Airman Classification.

2.2. Part II includes the following: Section A identifies the Specialty Training Standard (STS) and includes duties, tasks, technical references to support training, Air Education and Training Command (AETC) conducted training, wartime course and core tasks, and correspondence course requirements; Section B contains the course objective list and training standards supervisors will use to determine if airmen satisfied training requirements; Section C identifies available support materials. An example is a Qualification Training Package (QTP) which may be developed to support proficiency training. These packages are identified in AFIND 8, Numerical Index of Specialized Education/Training Publications; Section D identifies a training course index supervisors can use to determine resources available to support training. Included here are both mandatory and optional courses; Section E identifies MAJCOM unique training requirements supervisors can use to determine what additional training is needed to meet plan goals.

3. Using guidance provided in the CFETP will ensure individuals in this specialty receive effective and efficient training at the appropriate point in their career. This plan will enable us to train today's work force for tomorrow's jobs.

ABBREVIATIONS/TERMS EXPLAINED

Advanced Training (AT). Formal course which provides individuals who are qualified in one or more positions of their Air Force Specialty (AFS) with additional skills/knowledge to enhance their expertise in the career field. Training is for selected career airmen at the advanced level of the AFS.

Air Force Job Qualification Standard/Command Job Qualification Standard (AFJQS/CJQS). A comprehensive task list which describes a particular job type or duty position. They are used by supervisors to document task qualifications. The tasks on AFJQS/CJQS are common to all persons serving in the described duty position.

Allocation Curves. The relation of hours of training in different training settings to the degree of proficiency which can be achieved on specified performance requirements.

Career Field Education and Training Plan (CFETP). A CFETP is a comprehensive, multipurpose document encapsulating the entire spectrum of education and training for a career field. It outlines a logical growth plan that includes training resources and is designed to make career field training identifiable, to eliminate duplication, and to ensure this training is budget defensible.

Career Training Guide (CTG). A document that uses Task Modules (TMs) in lieu of tasks to define performance and training requirements for a career field.

Continuation Training. Additional training exceeding requirements with emphasis on present or future duty assignments.

Core Task. A task Air Force career field managers (AFCFMs) identify as a minimum qualification requirement within an Air Force specialty or duty position

Course Objective List (COL). A publication, derived from initial/advanced skills course training standard, identifying the tasks and knowledge requirements, and respective standards provided to achieve a 3 or 7 skill level in this career field. Supervisors use the COL to assist in conducting graduate evaluations in accordance with AFI 36-2201, Developing, Managing and Conducting Military Training Programs.

Distance Learning (DL). Training delivered to students at their base of assignment without an Air Education and Training Command (AETC) instructor physically present. The training media can take the form of interactive courseware (ICW), videoteletraining

(VTT), videotape, paper, or some combination of these.

Enlisted Specialty Training (EST). A mix of formal training (technical school) and informal training (on-the-job) to qualify and upgrade airmen in each skill level of a specialty.

Exportable Training. Additional training via computer assisted, paper text, interactive video, or other necessary means to supplement training.

Field Technical Training. Special or regular on-site training conducted by a field training detachment (FTD) or by a mobile training team.

Instructional System Development (ISD). A deliberate and orderly, but flexible process for planning, developing, implementing, and managing instructional systems. It ensures personnel are taught in a cost efficient way the knowledge, skills, and attitudes essential for successful job performance.

Initial Skills Training. A formal resident course which results in award of the entry level.

Occupational Survey Report (OSR). A detailed report showing the results of an occupational survey of tasks performed within a particular AFS.

On-the-Job Training (OJT). Hands-on, over-the-shoulder training conducted to certify personnel in both upgrade (skill level award) and job qualification (duty position certification) training.

Optimal Training. The ideal combination of training settings resulting in the highest levels of proficiency on specified performance requirements within the minimum time possible.

Qualification Training (QT). Actual hands-on task performance training designed to qualify an individual in a specific duty position. This portion of the dual channel on-the-job training program occurs both during and after the upgrade training process. It is designed to provide the performance skills required to do the job.

Qualification Training Package (QTP). An instructional package designed for use at the unit to qualify, or aid qualification, in a duty position or program, or on a piece of equipment. It may be printed, computer-based, or in other audiovisual media.

Representative Sites. Typical organizational units having similar missions, weapon systems or equipment, or a set of jobs, used as a basis for estimating average training capacities and costs within the Training Impact Decision System (TIDES).

Resource Constraints. Resource deficiencies, such as money, facilities, time, manpower, and equipment that preclude desired training from being delivered.

Skills Training. A formal course which results in the award of a skill level.

Specialty Training. A mix of formal training (technical school) and informal training

(on-the-job) to qualify and upgrade airmen in the award of a skill level.

Specialty Training Package and COMSEC Qualification Training Package. A composite of lesson plans, test material, instructions, policy, doctrine, and procedures necessary to conduct training. These packages are prepared by AETC, approved by National Security Agency (NSA), and administered by qualified communications security (COMSEC) maintenance personnel.

Specialty Training Standard (STS). An Air Force publication that describes skills and knowledge's that airman in a particular Air Force specialty needs on the job. It further serves as a contract between the Air Education and Training Command and the user to show the overall training requirements for an Air Force specialty code that the formal schools teach.

Standard. An exact value, a physical entity, or an abstract concept, established and defined by authority, custom, or common consent to serve as a reference, model, or rule in measuring quantities or qualities, establishing practices or procedures, or evaluating results. A fixed quantity or quality.

Task Module (TM). A group of tasks performed within an Air Force specialty that are performed together and that require common knowledge, skills, and abilities. TMs are identified by an identification code and a statement.

Total Force. All collective Air Force components (active, reserve, guard, and civilian elements) of the United States Air Force.

Training Capacity. The capability of a training setting to provide training on specified requirements, based on the availability of resources.

Training Impact Decision System (TIDES). A computer-based decision support technology being designed to assist Air Force career field managers in making critical judgments relevant to what training should be provided personnel within career fields, when training should be provided (at what career points), and where training should be conducted (training setting).

Training Planning Team (TPT). Comprised of the same personnel as a U&TW, however TPTs are more intimately involved in training development and the range of issues are greater than is normal in the U&TW forum.

Training Requirements Analysis. A detailed analysis of tasks for a particular AFS to be included in the training decision process.

Training Setting. The type of forum in which training is provided (formal resident school, on-the-job, field training, mobile training team, self-study etc.).

Upgrade Training (UGT). Mandatory training which leads to attainment of higher level of proficiency.

Utilization and Training Pattern. A depiction of the training provided to and the jobs performed by personnel throughout their tenure within a career field or Air Force specialty. There are two types of patterns: 1) Current pattern, which is based on the training provided to incumbents and the jobs to which they have been and are assigned; and 2) Alternate pattern, which considers proposed changes in manpower, personnel, and training policies.

Utilization and Training Workshop (U&TW). A forum of MAJCOM Air Force Specialty Code (AFSC) functional managers, Subject Matter Experts (SMEs), and AETC training personnel that determines career ladder training requirements.

SECTION A - GENERAL INFORMATION

1. Purpose. This CFETP provides information necessary for career field managers, commanders, training managers, supervisors, trainers and the technical training center to plan, develop, manage, and conduct an effective and efficient 1C5X1 career field training program. This plan outlines the training individuals in this specialty must receive in order to develop and progress throughout their career. For the purpose of this plan, training is divided into four areas: initial skills, upgrade, qualification, and continuation training. Initial skills training is the AFS specific training an individual receives upon entry into the Air Force or upon retraining into this specialty for award of the 3 skill level. For the 1C5X1 career field this training is provided by AETC at their Keesler AFB MS, training center (KTC), for the MCE system or at the technical training squadron at Tyndall AFB, FL for the RAOC/SAOC system. Upgrade training identifies the mandatory courses, task qualification requirements, and correspondence course completion required for award of the 3-, 5-, 7-, and 9-skill levels. Qualification training is actual hands-on task performance training designed to qualify an airman in a specific duty position. This training program occurs both during and after the upgrade training process. It is designed to provide the performance skills/knowledge training required to accomplish the job. Continuation training is additional training (either in-residence or exportable advanced training courses), or on-the-job training, provided to 3-, 5-, 7-, and 9-skill level personnel to increase their skills and knowledge beyond the minimum required. The CFETP also serves the following purposes:

1.1. Serves as a management tool to plan, manage, conduct, and evaluate a career field training program. Also, it is used to help supervisors identify training at the appropriate point in an individuals career.

1.2. Identifies task and knowledge training requirements for each skill level in this specialty and recommends training throughout each phase of an individual's career.

1.3. Lists training courses available in the specialty, identifies sources of training, and provides the training medium.

1.4. Identifies major resource constraints that impact implementation of the desired career field training program.

2. Use. The Air Force career field manager will maintain this CFETP IAW AFMAN 36-2245. Major command (MAJCOM) functional managers, and AETC will review this CFETP semiannually to ensure currency and accuracy
and forward recommended changes to the Air Force career field manager. Using the list of courses in Part II they will also determine whether duplicate training exists and take steps to eliminate duplication. Career field training managers at all levels will use this plan to ensure a comprehensive and cohesive training program is available/instituted for each individual in the career ladder.

2.1. AETC training personnel will develop/revise formal resident and exportable training based on requirements established by users and documented in Part II of this CFETP. They will also work with the Air Force career field manager to develop procurement and acquisition strategies for obtaining resources needed to provide the identified training.

2.2. The MAJCOM 1C5X1 functional managers will ensure their training programs complement the CFETP mandatory initial skills, upgrade, and continuation training requirements. Identified requirements can be satisfied by OJT, resident training, contract training, or exportable courseware/courses. MAJCOM-developed training to support this AFSC must be identified for inclusion in this plan and must not duplicate available training resources.

2.3. Qualification Training Packages (QTP) are developed according to priorities assigned by the Air Force career field manager, after coordination with MAJCOM functional managers.

2.4. Each individual will complete the mandatory training requirements specified in this plan. Course listings in Part II, Section B, will be used as a reference to support training.

3. Coordination and Approval. The AFCFM is the approval authority. MAJCOM representatives and AETC training personnel will identify and coordinate on the career field training requirements. The AETC training manager for this specialty will initiate an annual review of this document by AETC and MAJCOM Functional Managers (MFMs) to ensure currency and accuracy. Using the list of courses in Part II, they will eliminate duplicate training.

SECTION B - CAREER PROGRESSION INFORMATION

4. Specialty Descriptions

4.1. **Specialty Summary**. Manages and operates aerospace control and warning systems, including functions involving electronic attack (EA) and electronic protection (EP), surveillance, data link management, combat identification, and weapons control. Provides radar control and monitoring of air weapons during offensive and defensive air operations. Makes decisions in the conduct of air operations and in system equipment management.

4.2. **Duties and Responsibilities**.

4.2.1. **Aerospace Control and Warning Systems Apprentice.**

4.2.1.1. The apprentice is learning necessary skills to operate aerospace equipment and perform basic surveillance functions. Observes radar scope presentations learning appropriate reactions and use of computer generated displays. Initiates/evaluates track data on uncorrelated returns. Mobilizes command and control equipment and

components.

4.2.1.2. Gathers, displays, records, distributes, and maintains operational data. Coordinates flight planning information with other command and control units and air traffic control agencies. Monitors track data for accuracy, notifying data link managers when data becomes old. Displays and records amplifying information on both air and surface tracks. Reports all observations and monitors for emergency indications and radar interference to include ea. Maintain forms and data base files.

4.2.1.3. Understands the uses of EP, notifying supervisors when radar performance is degraded so EP techniques can be initiated.

4.2.1.4. Participates in training programs, preparing for position testing and evaluations. Maintains proficiency in duty position.

4.2.2. Aerospace Control and Warning Systems Journeyman

4.2.2.1. Identifies, maintains surveillance, and assists in controlling aerospace objects. Operates aerospace control and warning systems and simulation equipment. Interprets and reacts to radarscope presentations and computer-generated console displays. Compares and reports track positions based on flight data or data base files. Performs surveillance functions. Mobilizes command and control equipment and components. Performs or assists air weapons control functions. Maintains proficiency in controlling aircraft. Responsible for safety of flight for air operations being controlled and assistance to aircraft in distress. Determines location, speed, heading, and altitude of airborne objects affecting timely interception and rendezvous.

4.2.2.2. Gathers, displays, records, and distributes operational information. Coordinates and exchanges air movement and combat identification information among command and control units. Coordinates with air traffic control agencies on matters concerning aircraft departure, enroute flight, and recovery operations. Operates data link equipment and other automated data exchange devices for gathering and relaying operational information. Displays and records internal and external source information indicating air and surface track presence, speed, direction, altitude, and identity. Reports emergency signals and EA observations. Maintains logs, forms, and data base files. Evaluates radar detection and performance. Maintains liaison with air defense artillery, surface, and naval fire units to ensure safe passage of friendly air traffic.

4.2.2.3. Performs EP functions. Maintains maximum radar sensitivity using EP techniques to eliminate degradation caused by electronic warfare (EW) activities or other influences. Monitors operation of radar inputs and counter-measure consoles, anti-jamming displays, and radar sensors to enhance radar presentations. Recommends procedures and techniques to improve effectiveness of EP activities.

4.2.2.4. Supervises aerospace control and warning systems activities. Instructs and

evaluates operators in system equipment operation, radarscope and console presentation, computer console display, interpretation, and weapons control functions. Develops operational procedures based on command doctrine.

4.2.3. Aerospace Control and Warning Systems Craftsman

4.2.3.1. Performs aerospace surveillance, control, combat identification, and EP functions. Interprets computer-generated displays or console presentations to provide object detection and tracking. Interprets and evaluates computer displays, and relays information to determine courses of action. Identifies and resolves operational systems problems. Obtains and analyzes status of equipment, weapons, air bases, data links, and radio frequencies and channels. Maintains documentation and data base files. Prepares reports. Operates EP equipment to lessen effectiveness of electronic warfare (EW) activities or other influences. Mobilizes command and control equipment. Maintains proficiency in controlling aircraft. Responsible for safety of flight for air operations being controlled and assistance to aircraft in distress. Determines location, speed, heading, and altitude of airborne objects.

4.2.3.2. Operates aerospace surveillance, weapons control, combat identification, data link, and EP equipment. Conducts equipment operational checks, and advises maintenance of malfunctions. Gathers, evaluates, and relays information on system status, unusual events, and operating capabilities. Analyzes EW activities or other influences. Supervises operation of data links, anti-jamming and countermeasures consoles, and sensors to ensure mission completion. Evaluates potential EW actions, and recommends countermeasures to lessen impact on electronic defensive systems. Recommends procedures and techniques to improve sensor effectiveness.

4.2.3.3. Supervises aerospace control and warning systems activities. Instructs operators in system equipment operation, radarscope presentation, and computer console display interpretation. Ensures adequate and quality training to maintain high levels of operational readiness. Develops local operating procedures and ensures compliance with governing directives. Manages operation of command and control systems to obtain maximum efficiency and ensure mission accomplishment.

4.2.3.4. Performs training, planning, standardization and evaluation, and other staff functions. Performs staff assistance visits. Tests and evaluates capabilities of new equipment and propriety of new procedures.

4.2.4. Aerospace Control and Warning Systems Superintendent

4.2.4.1. Plans and organizes aerospace surveillance, control, combat identification, and EP functions. Analyzes computer displays, and directs appropriate courses of action. Identifies and resolves operational system problems. Supervises the development of weapons control procedures and techniques. Analyzes the status of equipment, weapons, air bases, data links, and radar frequencies and channels to ensure efficient operations.

Maintains documentation and data base files. Monitors operation of EP equipment systems to lessen effectiveness of electronic warfare (EW) activities or other influences. Supervises mobilization of command and control equipment and components. Supervises functions of air weapons activities.

4.2.4.2. Supervises operation of aerospace surveillance, weapons control, data link, and EP equipment. Analyzes information on system status operating capabilities, EW activities or other influences to ensure efficient operations. Supervises the operation of sensors, data links, and associated systems to ensure all assigned missions are completed. Evaluates potential EW actions, and recommends countermeasures actions to lessen impacts on electronic defensive systems. Recommends procedures and techniques to improve system effectiveness in different environmental conditions.

4.2.4.3. Directs training and evaluation of operators in system equipment operation, radarscope and console presentation, computer console display interpretation, and weapons control functions.

4.2.4.4. Normally the senior enlisted person in operations. Responsible for operational and administrative oversight of all enlisted personnel duties and actions.

5. Skill/Career Progression. Adequate training and timely progression from the apprentice to the superintendent skill level plays an extremely important role in the Air Force's ability to accomplish its mission. Therefore it is essential that everyone involved in training do their part to plan, develop, manage, conduct, and evaluate an effective and efficient training program. The guidance provided in this part of the CFETP will ensure individuals receive viable training at the appropriate points in their career. The following narrative, and the AFSC 1C5X1 career field flowcharts, identifies the training career path. It defines the training required in an individual's career.

5.1. Apprentice (3) Level Training. Initial skills training in this specialty consists of the tasks and knowledge training provided in the 3-skill level resident courses (E3ABR1C531 005) located at Keesler AFB MS and (Q-JSS-1C531) at Tyndall AFB FL. Task and knowledge requirements are identified in the specialty training standard, at part II, Section A. Individuals will work with a trainer to enhance their knowledge and skills and prepare for duty position qualification. Individuals must complete initial skills course to be awarded AFSC 1C531.

5.2. Journeyman (5) Level Training. Five skill level training in this specialty consists of task and knowledge training provided through the specialty training standard and is based on an analysis of the duties contained in AFMAN 36-2108. Career knowledge is provided in the 5-skill level CDC. Individuals must complete 5-skill level training in conjunction with 5-skill level CDC requirements to be awarded AFSC 1C551. Once upgraded to the 5-level, journeymen begin to broaden their experience base through continuation training and should seek qualification in other duty positions. Five levels may be assigned/qualify at job positions such as: Weapons Director (WD), Surveillance Technician (ST),

Electronic Protection Technician (EPT),), and Interface Control Technician (ICT). Individuals attend the Airman Leadership School (ALS) after having 48 months in the Air Force. Appointment as unit trainers is authorized for individuals considered the "most qualified." Individuals use their CDCs to prepare for testing under WAPS. They should consider continuing their education towards a CCAF degree.

5.3. Craftsman (7) Level Training. Upgrade training to the 7- skill level in this specialty consists of completing: all STS core tasks for the assigned duty position, and the 7-skill level Distance Learning (DL) course. A craftsman can expect to fill various supervisory and management positions such as Crew Chief, Battle Director Technician (BDT), Interface Control Technician (ICT), WD, Air Surveillance Technician (AST), and as a primary task certifier. They may be assigned to staff positions such as NCOIC of various duty sections, standardization and evaluation or training NCO, MAJCOM, Wing or Group positions, and as an Air National Guard Advisor. Seven levels should take courses or obtain added knowledge in management of resources and personnel. Continued academic education through CCAF and higher degree programs is strongly encouraged. In addition, when promoted to TSgt, individuals will attend the Noncommissioned Officer Academy.

5.4. Superintendent (9) Level Training. To be awarded AFSC 1C591, an individual must be an E-8 and complete the senior NCO academy. A Superintendent can expect to fill positions such as operations superintendent, NAF staff, and MAJCOM staff. Additional training in the areas of budget, manpower, resources, and personnel management should be pursued through continuing education. Additional higher education and completion of courses outside of the career AFSC core competencies are also recommended.

6. Training Decisions. This CFETP was developed to include life-cycle-training requirements for this specialty. Included in this spectrum was the strategy of when, where, and how to meet these training requirements. The strategy must be apparent and affordable to reduce duplication of training and eliminate a fragmented approach to training.

6.1. Initial Skills. At the October 1998 Utilization and Training Workshop the 1C5X1 STS was changed to increase student proficiency in the surveillance functions and task knowledge levels were increased in communications and TADIL operations. Additionally, all three levels will receive a copy of the CFETP and an explanation on its purpose and content.

6.2. Five-Level Upgrade Requirements. At the October 1998 Utilization and Training Workshop data link operations were added as a subject area for five levels in the 1C5X1 STS. The five-level CDC is now under revision and will incorporate this change.

6.3. Seven-Level Upgrade Requirements. The 1C5X1 October 98 Utilization and Training Workshop (U&TW) approved the AFCFM plan to convert in-resident seven level training to Distance Learning (DL). The requirement to attend and complete the

seven level course was waived for an undetermined period for DL course development.

6.4. Continuation Training. The purpose of continuation training is to provide additional training exceeding minimum upgrade training that allows individuals to become proficient at their present and future duty positions. Continuation training also assists individuals in maintaining proficiency at their duty position and affords them an opportunity to reach their full potential. MAJCOMs must develop a continuation training program that ensures individuals in the 1C5X1 career field receive the necessary training at the appropriate point in their career.

7. Community College of the Air Force (CCAF) Academic Programs. Enrollment in CCAF occurs upon completion of basic military training. CCAF provides the opportunity to obtain an Associate in Airway Science Degree. In addition to its associates degree program, CCAF offers the following:

7.1. Occupational Instructor Certification. Upon completion of instructor qualification training, consisting of the instructor methods course and supervised practice teaching, CCAF instructors who possess an associates degree or higher may be nominated by their school commander/commandant for certification as an occupational instructor.

7.2. Trade Skill Certification. When a CCAF student separates or retires, a trade skill certification is awarded for the primary occupational specialty. The College uses a competency based assessment process for trade skill certification at one of four proficiency levels: Apprentice, Journeyman, Craftsman/Supervisor, or Master Craftsman/Manager.

7.3. Degree Requirements: Prior to completing an associates degree, the five-level must be awarded and the following requirements must be met:

	Semester Hours
Technical Education	24
Leadership, Management, and Military Studies	6
Physical Education	4
General Education	15
Program Elective	15
Technical Education; Leadership, Management, and Military Studies; or General Education	
Total	64

7.3.1. Technical Education Requirements (24 Semester Hours): A minimum of 12 semester hours of Technical Core subjects/courses must be applied and the remaining semester hours applied from Technical Core/Technical Elective subjects/courses. Requests to substitute subjects/courses must be approved in advance by the Technical Branch.

Technical Core:

Subject/Courses	Semester Hours
Aeronautical laws and Regulations/Legislation	6
Aerospace Control and Warning Principles	9
Air Navigational Aids	3
Air Traffic Control Procedures	9
Air Transportation	3
Airport Management	3
CCAF Internship	16
Radar Approach Control	6

Technical Electives:

Subjects/Courses	Maximum Semester Hours
Advanced Flight Operations or Commercial Pilot's License	9
AFNCO Professional Military Education	12
Aviation/Flight Safety	3
Basic Flight Operations or Private Pilot's License	3
Climatology/Meteorology	3
Computer Science	6
FCC General Radiotelephone Operator's License	9
Physical Science	3
Technical Writing	3

7.3.2. Leadership, Management, and Military Studies (6 Semester Hours): Professional Military Education and/or Civilian Management courses.

7.3.3. Physical Education (4 Semester Hours): This requirement is satisfied by completion of Basic Military Training.

7.3.4. General Education (15 Semester Hours): Applicable courses must meet the Criteria for Application of Courses to the General Education Requirement (GER) as listed in the CCAF Student Guidebook and be in agreement with the definitions of the applicable General Education subjects/courses.

Subjects/Courses	Semester Hours
Written Communications	3
English Composition	
Mathematics/Natural Science	3

Intermediate algebra or a college-level mathematics course is required unless an acceptable mathematics course is applied as a Technical or Program Elective. If an acceptable mathematics course is applied as a Technical or Program Elective, a natural science course meeting GER application criteria may be applied as a General Elective Requirement. An acceptable natural science course may also be applied as

Program Elective credit.

Social Science: 3

Anthropology, Archaeology, Economics, Geography, Government, History, Political Science, Psychology, Sociology

Humanities 3

Fine Arts (History, Criticism, Theory, and Appreciation), Foreign Language, Literature, Philosophy, Religion

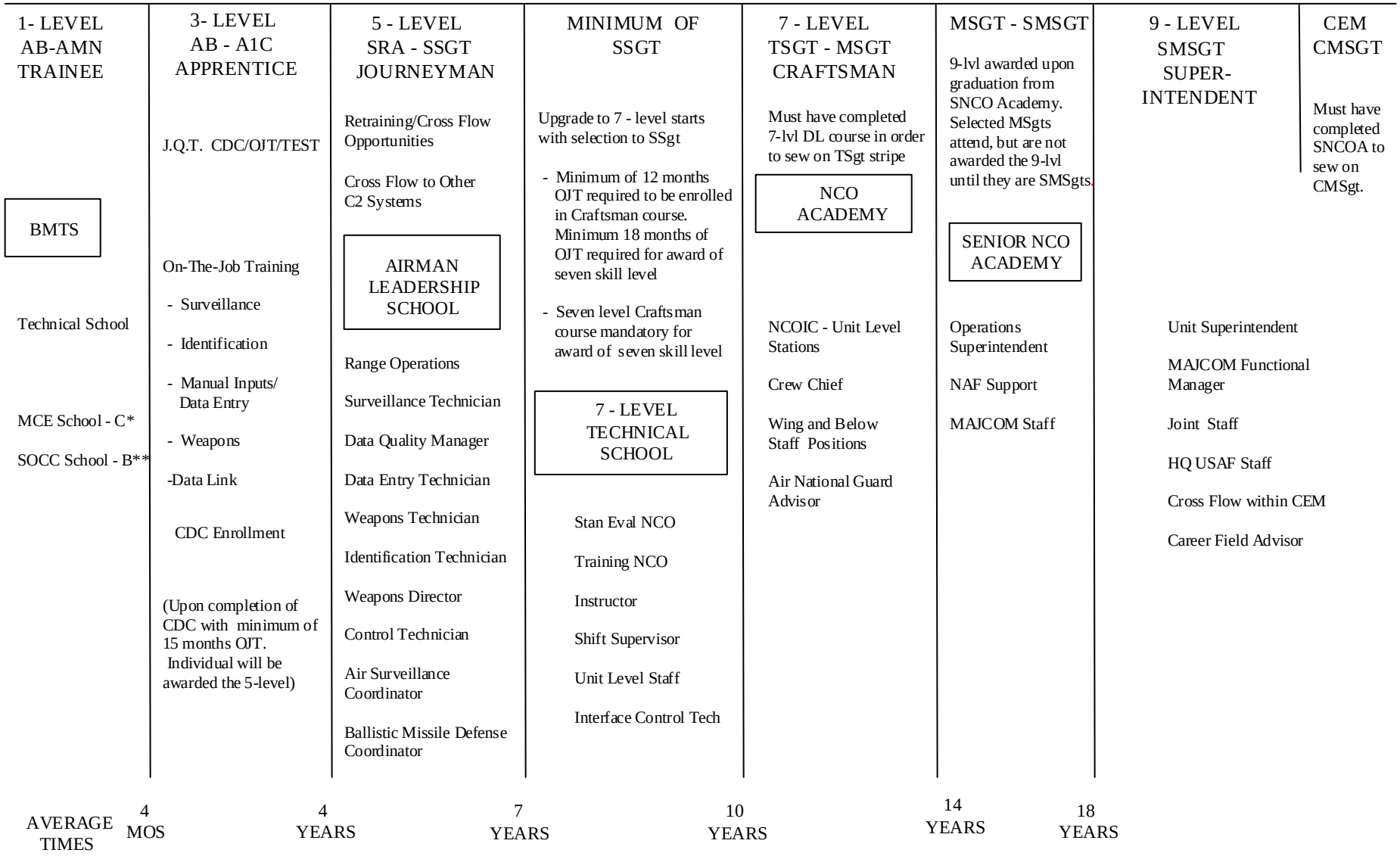
Oral Communications (Speech).....3

7.3.5. Program Elective (15 Semester Hours): Satisfied with applicable Technical Education; Leadership, Management, and Military Studies; or General Education subjects/courses, including natural science courses meeting GER application criteria. Six semester hours of CCAF degree applicable technical credit otherwise not applicable to this program may be applied. See the CCAF General Catalog for details regarding the associates of applied science degree for the specialty.

7.4. Additional off-duty education is a personal choice that is encouraged for all. Individuals desiring to become an Air Education and Training Command Instructor should actively pursue an associate's degree. A degreed faculty is necessary to maintain accreditation through the Southern Association of Colleges and Schools.

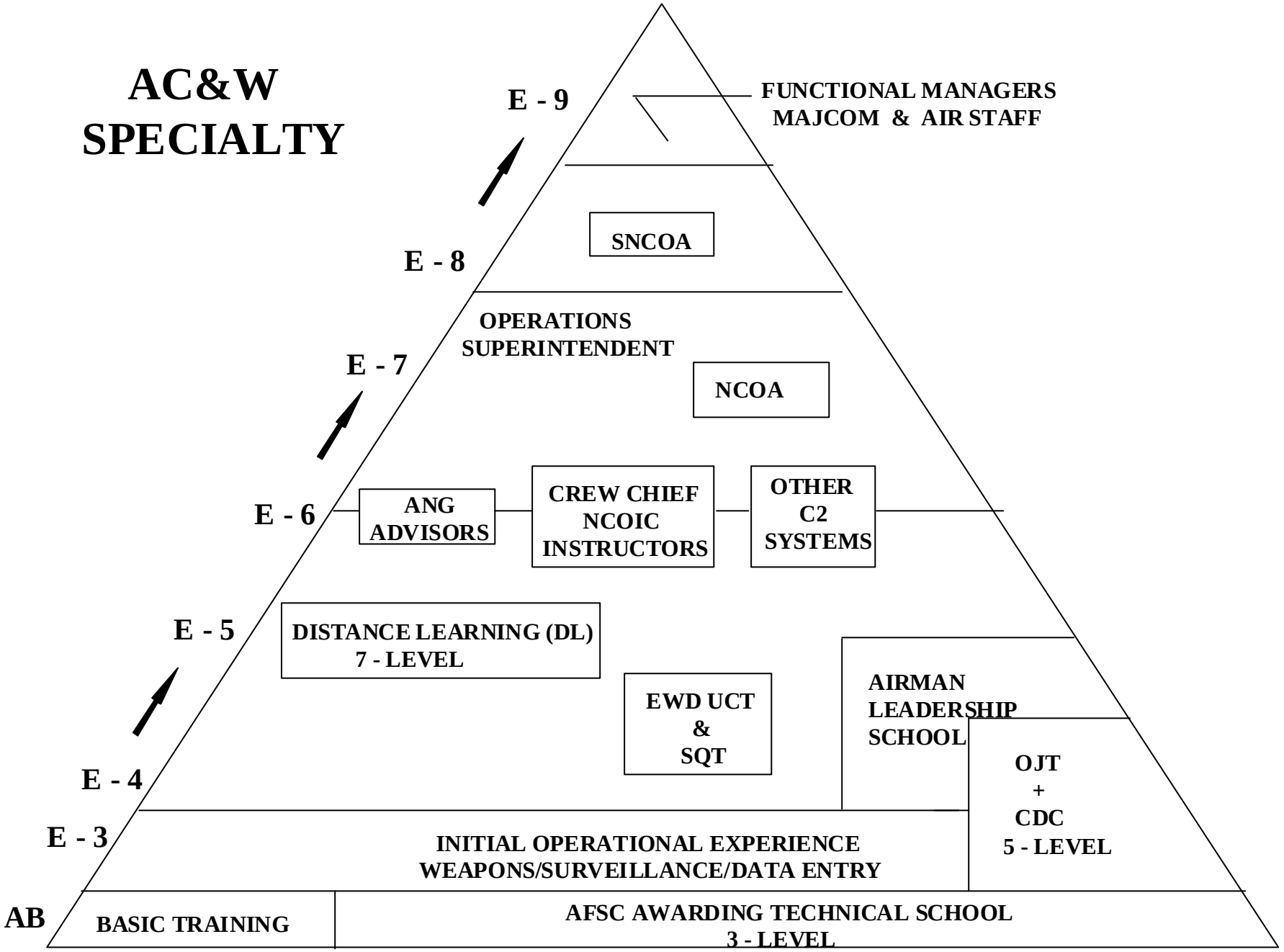
8. Career Field Education and Training Flowcharts. Charts depicting this specialty's career path are presented on the next pages. The career path outlines when training is required for each skill level and function within this specialty.

CAREER FIELD EDUCATION AND TRAINING CHART



* C SHRED WILL BE ASSIGNED TO INDIVIDUAL TRAINING IN MCE
** B SHRED WILL BE ASSIGNED TO INDIVIDUAL TRAINED ON SOCC EQUIPMENT

8.1. CAREER FIELD PATH



16 **8.2. CAREER FIELD PATH TRIANGLE**

SECTION C - SKILL LEVEL TRAINING REQUIREMENTS

9. Purpose. Skill levels in this career field are defined in terms of tasks and knowledge requirements. This section outlines the specialty qualification requirements for each skill level in broad, general terms and establishes the mandatory requirements for entry, award, and retention of each skill level. The specific task and knowledge training requirements are identified in the COL, and STS at Part II of this CFETP.

10. Specialty Qualification:

10.1. Apprentice (3) Level Training Requirements.

10.1.1. Specialty Qualification.

10.1.1.1. Knowledge. Mandatory knowledge includes: characteristics and limitations of aerospace surveillance and reporting systems; aircraft detection and tracking; communications equipment and radar capabilities and limitations; radar console and data link equipment presentations; receiving, recording, and relaying system information; fixed and mobile command and control system characteristics; aircraft control procedures; techniques, performance characteristics, and armament; meteorology pertaining to air weapons control operations; printout interpretations; combat identification techniques; air traffic regulations; EP equipment capabilities and limitations; and EP techniques.

10.1.1.2. Education. Completion of high school or General Education Development (GED) equivalency is mandatory for entry into this AFSC.

10.1.1.3. Training. For award of AFSC 1C531, completion of a basic aerospace control and warning systems course is mandatory.

10.1.1.4. Experience. Experience is mandatory in performing functions such as aerospace control and warning systems activities; operation of data display and computer input equipment or radar indicator equipment; interpretation of computer-generated displays and printouts or radar console presentations; or environmental systems operational procedures and techniques.

10.1.1.5. Other.

10.1.1.5.1. Eligibility for a Secret security clearance according to AFI 31-501 is mandatory for award and retention of these AFSCs.
10.1.1.5.2. Normal color vision as defined in AFI 48-123 is mandatory for entry into this AFSC.

10.1.1.5.3. Qualification to operate government vehicles according to AFI 24-301 and AFMAN 24-309 is desirable for entry into this AFSC.

10.1.1.6. Specialty Credits:

Suffix	Portion of AFS to Which Related
B	Sector Air Operations Center
C	Modular Control Equipment

10.2. Journeyman (5) Level Training Requirements.

10.2.1. Specialty Qualification.

10.2.1.1. Knowledge. Mandatory knowledge includes: characteristics and limitations of aerospace surveillance and reporting systems; aircraft detection and tracking; communications equipment and radar capabilities and limitations; radar console and data link equipment presentations; receiving, recording, and relaying system information; fixed and mobile command and control systems characteristics; aircraft control procedures; techniques, performance characteristics, and armament; meteorology pertaining to air weapons control operations; printout interpretations; combat identification techniques; air traffic regulations; EP equipment capabilities and limitations; EP techniques; and enemy order of battle.

10.2.1.2. Education. Completion of high school or General Education Development (GED) equivalency is mandatory for entry into this AFSC.

10.2.1.3. Training.

10.2.1.3.1. For award of AFSC 1C551D, completion of undergraduate air weapons director training is mandatory.

10.2.1.3.2. Completion of CDC 1C551 satisfies the knowledge requirements specified in the specialty qualification section (above) for award of the 5-skill level.

10.2.1.4. Experience. Experience is mandatory in performing functions such as aerospace control and warning systems activities; operation of data display and computer input equipment or radar indicator equipment; interpretation of computer-generated displays and printouts or radar console presentations; or environmental systems operational procedures and techniques.

10.2.1.5. Other:

10.2.1.5.1. Eligibility for a Secret security clearance according to AFI 31-501 is mandatory for award and retention of these AFSCs.

10.2.1.5.2. For entry into AFSC 1C5X1D it is mandatory that individuals hold at least a five-level in AFSC 1C5X1 and have commander approval.

10.2.1.5.3. For entry, award, and retention of AFSC 1C551D, physical qualification for weapons director duty according to AFI 48-123 is mandatory.

10.2.1.5.4. Specialty Shredout:

Suffix	D	Weapons Director

10.3. Craftsman (7) Level Training Requirements.

10.3.1. Specialty Qualification.

10.3.1.1. Knowledge:

10.3.1.1.1. For AFSC 1C571, mandatory knowledge includes: functional relationship within and among aerospace control and warning systems; aerospace control and warning systems operations; EP equipment, its capabilities and limitations; ground environment systems; electronic facilities; and EA and EP capabilities within each sensor.

10.3.1.1.2. For AFSC 1C571D, knowledge of aircraft control procedures and techniques is mandatory.

10.3.1.3. Training. Completion of Aerospace Control and Warning Craftsman Course (course E6ACS1C571 000) is mandatory for award of 7 skill level. Note, this requirement has been waived while the Craftsman Course is converted from in-resident training to Distance Learning.

10.3.1.4. Experience:

10.3.1.4.1. For AFSC 1C571, qualification is mandatory as an Aerospace Control and Warning Systems Journeyman. Also, experience is mandatory in performing or supervising functions such as aerospace surveillance and control systems or EP activities.

10.3.1.4.2. For AFSC 1C571D, qualification is mandatory as an Aerospace Control and Warning Systems Journeyman, Weapons Director. Also, experience is mandatory in performing or evaluating radar control and monitoring of air weapons.

10.3.1.5. Other:

10.3.1.5.1. Eligibility for a Secret security clearance according to AFI 31-501 is mandatory for award and retention of these AFSCs.

10.3.1.5.2. For AFSC 1C571D, physical qualification for Weapons Director duty according to AFI 48-123 is mandatory for award and retention of the specialty shred out.

b. Specialty Shredout:

Suffix	D	Weapons Director

10.4. Superintendent (9) Level Training Requirements.

10.4.1. Specialty Qualification.

10.4.1.1. Knowledge. Mandatory knowledge includes: thorough understanding of aerospace control and warning systems operations, equipment, procedures, and techniques for optimization of system effectiveness. Also, knowledge in management of personnel resources is mandatory.

10.4.1.2. Education. For entry into this specialty, completion of high school or General Education Development (GED) equivalency is mandatory. Also, completion of high school level courses in algebra and geometry is desirable.

10.4.1.3. Training. Completion of initial skills course, five-level CDC, seven-level course, and PME.

10.4.1.4. Experience. For AFSC 1C591, qualification is mandatory as an Aerospace Control and Warning Systems Craftsman. Also, experience is mandatory in supervising or managing aerospace systems operations.

10.4.1.5. Other. For award and retention in this AFSC, eligibility for a Secret security clearance according to AFI 31-501.

SECTION D - RESOURCE CONSTRAINTS

11. Purpose. This section identifies known resource constraints which preclude optimal/desired training from being developed or conducted, including information such as cost and manpower. Narrative explanations of each resource constraint and an impact statement describing what effect each constraint has on training are included. Also included in this section are actions required and office of primary responsibility. Resource constraints will be, as a minimum, reviewed and updated annually.

12. Lack of Communications Equipment.

12.1. Constraint: N/A.

12.1.1. Impact: N/A.

12.1.2. Resources: All equipment resources will be in place.

12.1.3. Action Required: None.

13. Manpower.

13.1. Constraint: 335 TRS does not have the Manpower to instruct STS elements. Three additional Instructors and five student man-years.
Without added manpower technical school will not be able to train the following STS elements: 8.1.5.4, 8.2.1, 8.2.2, 8.2.3, 8.2.5, 8.2.6.1, 8.2.6.2, 8.5, 11.10.2, 11.13.

13.1.1. Impact. 335 TRS can not meet increased training requirements identified at the 1C5X1 October 1998 U&TW. The increased STS elements required a course redesign which has lengthened the course by 7 days. Without the additional increase in instructors and student man-years (course length) standardized training will be lost and gaining units must make up the difference, and may negatively impact combat readiness reported in SORTS.

13.1.2. Resources Required. Additional three instructor authorizations, and an increase in five student man-years.

13.1.3.Action Required. Obtain 3 Instructors and 5 student man-years. The authorizations have been identified by 335 TRS/TRRA/UOAA and relayed to HQ USAF/XOCE.

BY ORDER OF THE SECRETARY OF THE AIR FORCE

OFFICIAL MARVIN R. ESMOND , Lieutenant General, USAF
Deputy Chief of Staff, Plans and Operation

Part II

SECTION A - SPECIALTY TRAINING

1. Implementation. This STS will become effective upon issue in field. It will be used in 3 level course for technical training provided by AETC for classes beginning 991124

2. Purpose. As prescribed in AFI 36-2201, this STS:
2.1. Lists in the column 1 (Task, Knowledge, and Technical Reference) the most common tasks, knowledge, and technical references (TR) necessary for airman to perform duties in the 3-, 5-, and 7-skill level. Number task statements sequentially i.e., 1.1, 1.2,
2.2. Column 2 (Core Tasks) identifies, by asterisk (*), specialty-wide training requirements.
2.3. Provides certification for OJT. Column 3 is used to record completion of tasks and knowledge training requirements. Use automated training management systems to document technician qualifications, if available. Task certification must show a certification/completed date. (*As a minimum, use the following column designators: Tng Comp, Certifier Initials*).
2.4. Shows formal training and correspondence course requirements. Column 4 shows the proficiency to be demonstrated on the job by the graduate as a result of training on the task/knowledge and the career knowledge provided by the correspondence course. See CADRE/AFSC/CDC listing maintained by the unit training manager for current CDC listings.
2.5. **Qualitative Requirements.** Attachment 1 contains the proficiency code key used to indicate the level of training and knowledge provided by resident training and career development courses.
2.6. Becomes a job qualification standard (JQS) for on-the-job training when placed in AF Form 623, **On-The-Job Training Record**, and used according to AFI 36-2201. When used as a JQS, the following requirements apply:
2.6.1. **Documentation.** Document and certify completion of training. Identify duty position requirements by circling the subparagraph number next to the task statement. As a minimum, complete the following columns in Part 2 of the CFETP: Training Completed, Trainee Initials, Trainer Initials, Certifier Initials (if applicable). An AFJQS may be used in lieu of Part II of the CFETP only upon approval of the AFCFM. ***NOTE:*** The AFCFM may supplement these minimum documentation procedures as needed or deemed necessary for their Career Field.
2.6.1.1. **Converting from Old Document to CFETP.** Use the new CFETP to identify and certify all past and current qualifications. For those tasks previously certified and required in the current duty position, evaluate current qualifications and, when verified, recertify using current date as completion date and enter certifier's initials. For previous certification on tasks not required in the current duty position, carry forward *only* the previous completion date. If and when these tasks become a duty position requirement, recertify with current date and certifier's initials.

2.6.1.2. **Documenting Career Knowledge.** When a CDC is not available: the supervisor identifies STS training references that the trainee requires for career knowledge and ensures, as a minimum, that trainees cover the mandatory items in AFI 26-2108. For two-time CDC course exam failures: supervisors identify all STS items corresponding to the areas covered by the CDC. The trainee completes a study of STS references, undergoes evaluation by the task certifier, and

receives certification on the STS. ***NOTE:*** Career Knowledge must be documented prior to submitting a CDC waiver.

2.6.1.3. **Decertification and Recertification.** When an airman is found to be unqualified on a task previously certified for their position, the supervisor lines through the previous certification or deletes previous certification when using automated system. Appropriate remarks are entered on the AF Form 623A, **On-The-Job Training Record Continuation Sheet**, as to the reason for decertification. The individual is recertified (if required) either by erasing the old entries and writing in the new or by using correction fluid (if the entries were made in ink) over the previously certified entry.

2.6.2. **Training Standard.** Tasks are trained and qualified to the go/no go level. Go means the individual can perform the task without assistance and meet local demands for accuracy, timeliness, and correct use of procedures.

2.7. Is a guide for development of promotion tests used in the Weighted Airman Promotion System (WAPS). Specialty Knowledge Tests (SKTs) are developed at the USAF Occupational Measurement Squadron by senior NCOs with extensive practical experience in their career fields. The tests sample knowledge of STS subject matter areas judged by test development team members as most appropriate for promotion to higher grades. Questions are based upon study references listed in the WAPS catalog. Individual responsibilities are in chapter 14 of AFI 36-2606, *US Air Force Reenlistment, Retention, and NCO Status Programs* (formerly AFR 35-16, volume 1). WAPS is not applicable to the Air National Guard.

3. Recommendations. Report unsatisfactory performance of individual course graduates to 335 TRS/UOA, 801 Hercules Street SU 227, Keesler AFB MS 39534-2037. Reference specific STS paragraphs. For a quick response to problems call the Customer Service Information Line, DSN 597-4566, any time day or night.

BY ORDER OF THE SECRETARY OF THE AIR FORCE

OFFICIAL

STS 1C5X1

THIS BLOCK FOR IDENTIFICATION PURPOSES ONLY		
NAME OF TRAINEE		
PRINTED NAME *(Last, First Middle Initial)*	INITIALS *(Written)*	SSAN

PRINTED NAME OF CERTIFYING OFFICIAL AND WRITTEN INITIALS	
N/I	N/I
N/I	N/I
N/I	N/I
N/I	N/I
N/I	N/I
N/I	N/I

QUALITATIVE REQUIREMENTS

PROFICIENCY CODE KEY		
	SCALE VALUE	DEFINITION: The Individual
TASK PERFORMANCE LEVELS	1	Can do simple parts of the task. Needs to be told or shown how to do most of the task. (EXTREMELY LIMITED)
	2	Can do most parts of the task. Needs help only on hardest parts. (PARTIALLY PROFICIENT)
	3	Can do all parts of the task. Needs only a spot check of completed work. (COMPETENT)
	4	Can do the complete task quickly and accurately. Can tell or show others how to do the task. (HIGHLY PROFICIENT)
*TASK KNOWLEDGE LEVELS	a	Can name parts, tools, and simple facts about the task. (NOMENCLATURE)
	b	Can determine step by step procedures for doing the task. (PROCEDURES)
	c	Can identify why and when the task must be done and why each step is needed. (OPERATING PRINCIPLES)
	d	Can predict, isolate, and resolve problems about the task. (ADVANCED THEORY)
**SUBJECT KNOWLEDGE LEVELS	A	Can identify basic facts and terms about the subject. (FACTS)
	B	Can identify relationship of basic facts and state general principles about the subject. (PRINCIPLES)
	C	Can analyze facts and principles and draw conclusions about the subject. (ANALYSIS)
	D	Can evaluate conditions and make proper decisions about the subject. (EVALUATION)

EXPLANATIONS

*	A task knowledge scale value may be used alone or with a task performance scale value to define a level of knowledge for a specific task. (Examples: b and 1b)
**	A subject knowledge scale value is used alone to define a level of knowledge for a subject not directly related to any specific task, or for a subject common to several tasks.
-	This mark is used alone instead of a scale value to show that no proficiency training is provided in the course or CDC.
x	This mark is used alone in course columns to show that training is required but not given due to limitations in resources.

Note: All tasks and knowledge items shown with a proficiency code are trained during war time

NOTES

1. Items in Column 1 marked with a pound (#) are war time tasks.

2. Items in Column 1 marked with an asterisk (*) are core tasks.

3. Personnel are required to be certified only on those systems possessed by the unit.

4. Due to equipment limitations in the Q-JSS-1C531 course, STS elements 11.3.2. and 11.3.3 are taught to the "A" level only.

5. Due to equipment limitations in the Q-JSS-1C531 course, STS element 8.2.5 will be taught to the B knowledge level only.

6. STS element 8.1.1., 8.1.2., 8.1.3. and 8.2.5. are defined as subject knowledge (B). These elements will be taught to the 2b level when Keesler begins operation on the new OMs (MCE) 991124.

7. STS element 11.2.1.1., 11.2.1.2., and 11.2.1.3. will be taught to the "A" level in Q-JSS-1C531 course.

8. STS element 11.10.1. applies only to the Q-JSS-1C531 course taught at Tyndall AFB.

9. STS elements 8.2.2., 11.1., 11.10.2., 11.10.3.3., 11.12.2. and 11.12.5. are not trained in the Q-JSS-1C531 course.

10. This STS will be implemented with class 991124, 3 level course at Keesler AFB.

1. Tasks, Knowledge, and Technical References	2.	3. Certification for OJT					4. Proficiency Codes Used to Indicate Training/Information Provided					
	Core Tasks	A	B	C	D	E	A 3 Skill Level		B 5 Skill Level		C 7 Skill Level	
		Start Date	Completion Date	Trainee Initials	Trainer Initials	Certifying Official	(1) Course	(2) CDC	(1) Course	(2) CDC	(1) Course	(2) CDC
1. Career Progression TR: AFI 36-2606, AFMAN 36-2108, and AFI 36-2502; AFP 36-2241												
1.1. Enlisted Education and Training Path	*						A			B	B	
1.2. 1C5X1 CFETP	*						A			B	B	
1.3. Skill Level Duties of AFSCs 1C531/51/71	*						A			B	B	
2. Command & Missions TR: AFMD 2, 8, 9, 15; AFI 13-212 Vols I, II, III; NORAD Agreement												
2.1. DOD Level Command												
2.1.1. Combined												
2.1.1.1. NORAD	*						A			B	-	
2.1.1.2. NATO	*						A			B	-	
2.1.2. Unified												
2.1.2.1. USCINCCENT/SPACE/ACOM/TRANS/SOUTH/ PAC/SOC/STRAT/EUR TR: SG 503, 506	*						A			B	-	
3. Systems TR: 11 & 13 Series Instructions												
3.1. Air Defense Systems (Components & Functions)												
3.1.1. Theater Air Control System (TACS) AOC, CRC, CRE, ASOC, TACP, AWACS, ABCCC, JSTARS)	# *						A			B	B	
3.1.2. NORAD Joint Surveillance System (JSS) TR: SG 137	*						A			B	B	
3.1.3. Iceland Air Defense System (IADS) TR: SG 502	*						A			B	B	
3.1.4. Korean Air Defense System (KADS) TR: SG 501	*						A			B	B	
4. Supervision TR: AFMAN 36-2108, AFPAM 36-2618, AFI 36-2201, AFI 36-2403, AFI 36-2907, AFI 36-2503, AFP 36-2618, DODD5500-735 series												
4.1. Personnel Orientation												

1. Tasks, Knowledge, and Technical References	2.	3. Certification for OJT					4. Proficiency Codes Used to Indicate Training/Information Provided					
	Core Tasks	A	B	C	D	E	A 3 Skill Level		B 5 Skill Level		C 7 Skill Level	
		Start Date	Completion Date	Trainee Initials	Trainer Initials	Certifying Official	(1) Course	(2) CDC	(1) Course	(2) CDC	(1) Course	(2) CDC
4.1.1. Orient Newly Assigned Personnel to the Organization and Mission of the Unit TR: AFI 36-2201							-			-	-	
4.1.2. Initiate Written Guidance Concerning Operation Activities TR: AFMAN 37-126							-			-	-	
4.1.3. Assign Personnel to Duty Positions							-			-	-	
4.1.4. Schedule Work Assignments							-			-	-	
4.1.5. Purpose of Personnel Information File (PIF)							-			-	-	
4.1.6. Establish Performance Standards							-			-	-	
4.2. Supervise Operations Activities TR: 13 Series Instructions							-			-	-	
4.2.1. Evaluate Work Performance Using Appropriate Rating Forms TR: AFI 36-2403							-			-	-	
4.2.2. Resolve Operational Problems Encountered By Subordinate Personnel							-			-	-	
4.2.3. Initiate Action to Correct Substandard Performance TR: AFI 36-2907 and AFI 36-2503							-			-	-	
5. Training TR: AFI 36-2201, AFI 36-2101, AFM 36-2108, AFM 36-2236, AFCAT 36-2223, MCR 50-75 Vols I & II												
5.1. Evaluate Personnel for Training							-			-	-	
5.2. Conduct OJT							-			-	-	
5.2.1. Prepare Job Qualification Standards							-			-	-	
5.2.2. Motivate Trainees, Trainers, and Certifiers							-			-	-	
5.2.3. Counsel Trainees on Their Progress							-			-	-	
5.3. Monitor Effectiveness of:												
5.3.1. Career Knowledge Upgrade Training							-			-	-	
5.3.2. Job Proficiency Upgrade Training							-			-	-	
5.3.3. Qualification Training							-			-	-	
6. Security TR: DOD5200.IR; AFI 10-1101, AFI 31-101, 401, 501, 601, AFI 14-302, AFI 33-202, 203, AFI 71-101, AFSS 14005, SG 712												

1. Tasks, Knowledge, and Technical References	2.	3. Certification for OJT					4. Proficiency Codes Used to Indicate Training/Information Provided					
	Core Tasks	A	B	C	D	E	A 3 Skill Level		B 5 Skill Level		C 7 Skill Level	
		Start Date	Completion Date	Trainee Initials	Trainer Initials	Certifying Official	(1) Course	(2) CDC	(1) Course	(2) CDC	(1) Course	(2) CDC
6.1. Command and Control Systems Security												
6.1.1. Computer Security System (COMPUSEC)												
6.1.1.1. Threats	# *						A			-	-	
6.1.2. Communications Security (COMSEC)												
6.1.2.1. Crypto Security	# *						A			-	-	
6.1.2.2. Physical Security of COMSEC	# *						A			-	-	
6.1.3. Emission Security (EMSEC)	# *						A			-	-	
6.1.4. Transmission Security (TRANSEC)	# *						A			-	-	
6.2. Security Programs												
6.2.1. Operational Security (OPSEC)												
6.2.1.1. Specific OPSEC Vulnerabilities of the 1C5X1 Career Field	# *						A			-	-	
6.2.2. Resource Protection Program TR: AFI 31-209												
6.2.2.1. Controlled Areas (A, B, C)	# *						A			-	-	
6.2.2.2. Controlled Area Badges (Restricted Area Badges)	# *						A			-	-	
6.2.2.3. Controlled Area Entrance	# *						A			-	-	
6.2.3. Information Security TR: AFI 31-401												
6.2.3.1. Marking Classified Material	*						A			-	-	
6.2.3.2. Safekeeping and Storage of Classified Material	*						A			-	-	
6.2.3.3. Compromise of Classified Material	*						A			-	-	
6.2.3.4. Access, Dissemination and Accountability	*						A			-	-	
6.2.3.5. Transmitting Classified Material	*						A			-	-	
6.2.3.6. Disposal of Classified Material	*						A			-	-	
6.2.3.7. Security Classification Guide	*						A			-	-	
6.2.4. Personnel Security TR: AFI 31-501	*						-			-	-	
6.2.5. Industrial Security TR: AFI 31-601	*						-			-	-	
6.3. Human Intelligence (HUMINT)												
6.3.1. Espionage	# *						A			A	-	

1. Tasks, Knowledge, and Technical References	2.	3. Certification for OJT					4. Proficiency Codes Used to Indicate Training/Information Provided					
	Core Tasks	A	B	C	D	E	A 3 Skill Level		B 5 Skill Level		C 7 Skill Level	
		Start Date	Completion Date	Trainee Initials	Trainer Initials	Certifying Official	(1) Course	(2) CDC	(1) Course	(2) CDC	(1) Course	(2) CDC
6.3.2. Subversion	# *						A			A	-	
6.3.3. Sabotage	# *						A			A	-	
6.3.4. Terrorism	# *						A			A	-	
7. Air Force Occupational Safety and Health (AFOSH) Program TR: AFI 91-301 and FI 91-301												
7.1. Occupational Hazards	*						A			-	-	
7.2. AFOSH Standards for AFSC 1C5X1												
7.2.1. Observe Safety Precautions in Work Area	*						1b			-	-	
7.2.2. Use Safety Procedures Around Electronic Equipment	*						1b			-	-	
8. Communication TR: ACPS 121, 125, and 165; AFI 11-214, JCP Pub 12 Vol IV, NI 10-8(S), STU III User Manual												
8.1. Voice Procedures TR: SG 805												
8.1.1. HF TR: SG 740	# *						B			B	B	
8.1.2. VHF	# *						B			B	B	
8.1.3. UHF	# *						B			B	B	
8.1.4. SATCOM	# *						B			B	B	
8.1.5. Secure Voice System												
8.1.5.1. Have Quick TR: STP, SG 818	# *						A			B	-	
8.1.5.2. Secure Telephone Unit (STU III)	*						A			B	-	
8.1.5.3. Theater Battle Management Core System (TBMCS)	# *						-			B	-	
8.1.5.4. Global Command & Control System/Common Operating Picture (GCCS/COP)	# *						A			B	B	
8.1.6. Non-Secure Voice System							A			B	-	
8.2. Systems Interface/Interoperability												
8.2.1. North American Aerospace Defense Command (NORAD)	*						A			B	-	
8.2.2. Modular Control Equipment (MCE) TR: SG 101	# *						A			B	-	

1. Tasks, Knowledge, and Technical References	2.	3. Certification for OJT					4. Proficiency Codes Used to Indicate Training/Information Provided					
	Core Tasks	A	B	C	D	E	A 3 Skill Level		B 5 Skill Level		C 7 Skill Level	
		Start Date	Completion Date	Trainee Initials	Trainer Initials	Certifying Official	(1) Course	(2) CDC	(1) Course	(2) CDC	(1) Course	(2) CDC
8.2.3. Theater Air Control System (TACS) TR: SG 101, 814	# *						A			A	B	
8.2.4. PACAF C2 System	# *						-			B	-	
8.2.5. Data Links TR: SG 500, 829, 830, 31, 832, 833, 832	# *						B			B	B	
8.2.6. Displays												
8.2.6.1. ADSI	# *						A			B	C	
8.2.6.2. RADIL TR: STP SG 715, 730, 731, 732, 733, 738, 742, 744, 745, 746, 747, 748, 749, 750, 751	# *						A			B	C	
8.3. Radio/Telephone Procedures (RT) TR: SG 805, AFI 33-112/33-113												
8.3.1. Phonetic Alphabet	# *						2b			-	-	
8.3.2. Prowords	# *						2b			B	-	
8.3.3. Operational Brevity Code	# *						A			B	-	
8.3.4. Minimize Procedures	*						A			B	-	
8.4. Authentication Procedures							2b			-	-	
8.5. Digital Data Link TR: Joint Tactical Air Ops Interface Interoperability Handbook, STP SG 838	# *						A			B	-	
8.6. Electronic Warfare TR: AFPD 10-7, AFI 10-707, AFI 10-703												
8.6.1. Electronic Attack/Electronic Protection EA/EP TR: SG 350, 352, 353												
8.6.1.1. Mechnical	# *						A			B	-	
8.6.1.2. Electronic	# *						A			B	-	
8.6.1.3. Communication	# *						A			B	-	
8.7. EA Threat	# *						A			-	A	
8.8. Employ Operator EP Techniques TR: SG 912	# *						1a			B	B	
8.9. Respond to EA Activity												
8.9.1. Determine Jamming												
8.9.1.1. Position	# *						1a			-	B	

1. Tasks, Knowledge, and Technical References	2.	3. Certification for OJT					4. Proficiency Codes Used to Indicate Training/Information Provided					
	Core Tasks	A	B	C	D	E	A 3 Skill Level		B 5 Skill Level		C 7 Skill Level	
		Start Date	Completion Date	Trainee Initials	Trainer Initials	Certifying Official	(1) Course	(2) CDC	(1) Course	(2) CDC	(1) Course	(2) CDC
8.9.1.2. Type	# *						1a			-	-	
8.9.1.3. Intensity	# *						1a			-	-	
8.10. Report Jamming	# *						1a			-	-	
8.11. Report Interference	# *						1a			-	-	
8.12. Electro Magnetic Interference (EMI) Report	# *						-			A	C	
9. Enter/Interpret Weather Data TR: AFM 15-111, SG 825	# *						2b			B	-	
10. Basic Concepts TR: AFTTP 3-1 Series												
10.1. Sensors	# *						A			B	-	
10.2. Computer	# *						A			B	-	
11. Basic Operational Functions TR: 13 Series, Litton Hand Book, TM 638 Series												
11.1. Systems Initialization												
11.1.1. Concept	# *						A			B	-	
11.1.2. Perform Minimum Start-Up	# *						2b			-	-	
11.2. Perform Surveillance Functions												
11.2.1. Manual												
11.2.1.1. Detection	# *						1b			-	-	
11.2.1.2. Reporting	# *						1b			-	-	
11.2.1.3. Track Continuity	# *						1b			-	-	
11.2.2. Computer Automated												
11.2.2.1. Detection	# *						2b			B	-	
11.2.2.2. Reporting	# *						2b			B	-	
11.2.2.3. Track Continuity	# *						2b			B	-	
11.2.2.4. Passive Tracking	# *						2b			B	b	
11.3. Identification Functions TR: 13 Series: NORAD INS 10-15												
11.3.1. Track Correlation	# *						A			-	-	
11.3.2. Use Electronic Identification	# *						2b			-	-	
11.3.3. Use Manual Methods	# *						2b			-	-	

1. Tasks, Knowledge, and Technical References	2.	3. Certification for OJT					4. Proficiency Codes Used to Indicate Training/Information Provided					
	Core Tasks	A	B	C	D	E	A 3 Skill Level		B 5 Skill Level		C 7 Skill Level	
		Start Date	Completion Date	Trainee Initials	Trainer Initials	Certifying Official	(1) Course	(2) CDC	(1) Course	(2) CDC	(1) Course	(2) CDC
11.3.4. Criteria	# *						A			B	B	
11.4. Weapons Operations TR: AFI 11-214, 3-1, SG 108, 109, 110, 111, 112, 113, 115, 822, 823												
11.4.1. Procedures	# *						A			B	-	
11.4.2. Tactics	# *						A			B	-	
11.4.3. Continuum of Control	# *						A			B	-	
11.5. Mission Planning												
11.5.1. Concept	# *						A			B	B	
11.5.2. Procedures	# *						A			B	B	
11.5.3. Air Task Order TR: (ATO) SG 811	# *						A			B	2b	
11.5.4. TACOPDAT TR: SG 811	# *						-			A	2b	
11.5.5. Airspace Coordination Order (ACO) TR: AFP 102-2	# *						A			B	C	
11.6. Coordinate												
11.6.1. Use Internal Procedures	# *						2b			-	-	
11.6.2. Use External Procedures	# *						2b			-	-	
11.7. Prepare Reports TR: AFI 10-201; JCS PUB 6 Vol V, 12, and 25												
11.7.1. Equipment Status							-			-	-	
11.7.2. Operational Reports (OPREPs) TR: AFM 10-206							-			A	2b	
11.7.3. Status of Resources and Training Systems (SORTS)							-			B	2b	
11.7.4. United States Message Text Format (USMTF) TR: AFP 102							-			A	2b	
11.8. Emergency Actions (EAs) TR: NR 55-5 Vol III, and NI 10-8, NI 10-4, JCS PUB 10 & 12, MCM 151-92												
11.8.1. ALERT CONDITION (LERTCON)												
11.8.1.1. Emergency Conditions	# *						A			B	-	
11.8.1.2. Defense Readiness Conditions (DEFCON)	# *						A			B	-	

1. Tasks, Knowledge, and Technical References	2.	3. Certification for OJT					4. Proficiency Codes Used to Indicate Training/Information Provided					
	Core Tasks	A	B	C	D	E	A 3 Skill Level		B 5 Skill Level		C 7 Skill Level	
		Start Date	Completion Date	Trainee Initials	Trainer Initials	Certifying Official	(1) Course	(2) CDC	(1) Course	(2) CDC	(1) Course	(2) CDC
11.8.1.3. Threat Warning							-			-	-	
11.8.1.4. Alerting Networks							-			-	-	
11.8.1.5. Process Emergency Action Messages (EAM)							-			-	-	
11.9. Conduct Equipment Checks TR: Litton Hand Book, TM 638 Series	# *						2b			-	-	
11.10. Operate Equipment												
11.10.1. Regional Air Operations Center/Sector Air Operations Control Center (RAOC/SAOC)	# *						2b			-	-	
11.10.2. MCE TRT: SG 900	# *						2b			-	-	
11.10.3. CTAPS TR: SG 837												
11.10.3.1. Definition	# *						A			B	-	
11.10.3.2. Purpose	# *						A			B	-	
11.10.3.3. Basic Operation	# *						2b			B	-	
11.11. Radar Evaluation Procedures	# *						-			A	B	
11.12. Use Reference Systems TR: 13MCS Series and AFI 11-214												
11.12.1. World Geographic Reference System (GEOREF)	# *						2b			B	-	
11.12.2. Military Grid Reference System/Universal Transverse Mercator (MGRS/UTM)	# *						2b			B	-	
11.12.3. LAT/LONG	# *						2b			B	-	
11.12.4. Polar Grid	# *						2b			B	-	
11.12.5. X and Y	# *						2b			B	-	
11.13. Display Operations Information	# *						2b			-	-	
11.14. Use Checklist TR: 13 Series and AFI 11-214							-			-	-	
11.15. Intelligence TR: 200 Series, AFI 14-105, and AFPD 14-3							-			-	B	

Section B-Course Objective List

4. Measurement. Each objective is indicated as follows: **W** indicates task or subject knowledge which is measured using a written test, **PC** indicates required task performance which is measured with a performance progress check, and **PC/W** indicates separate measurement of both knowledge and performance elements using a written test and a performance progress check.

5. Standard. The standard is 70% on written examinations. Standards for performance measurement are indicated in the objective and delineated on the individual progress checklist. Instructor assistance is provided as needed during the progress check, and students may be required to repeat all or part of the behavior until satisfactory performance is attained.

6. Proficiency Level. Most task performance is taught to the "2b" proficiency level which means the students can do most parts of the task, but does need assistance on the hardest parts of the task (partially proficient). The student can also determine step by step procedures for doing the task.

7. Course Objective. These objectives are listed in the sequence taught by Block of Instruction.

7.1. **Initial Skills Course**

7.1.1. **Block I Basic Operational Functions**

7.1.1.2. Introduction to Aerospace Control and Warning

7.1.1.2.1. Identify career progression through the Command & Control Systems Operator career field. STS: 1.1, 1.2, 1.3 Meas: W

7.1.1.2.2. Identify the duties performed by different skill levels within the AC&W career field. STS: 1.2 Meas: W

7.1.1.2.3. Identify commands using the AC&W subdivision. STS: 2.1.1.1, 2.1.1.2, 2.1.2.1 Meas: W

7.1.1.3. Security

7.1.1.3.1. Identify categories of command and control systems security. STS: 6.1.1.1, 6.1.2.1, 6.1.2.2, 6.1.2.3, 6.1.3 Meas: W

7.1.1.3.2. Identify security classification characteristics. STS: 6.2.3.1, 6.2.3.2, 6.2.3.3, 6.2.3.4, 6.2.3.5, 6.2.3.6, 6.2.3.7 Meas: W

7.1.1.3.3. Identify categories of Human Intelligence (HUMINT). STS: 6.3.1, 6.3.2,

6.3.3, 6.3.4 Meas: W

7.1.1.3.4. Identify characteristics of the Resource Protection Program. STS: 6.2.2.1, 6.2.2.2, 6.2.2.3 Meas: W

7.1.1.3.5. Identify alert condition terms. STS: 11.8.1.1, 11.8.1.2 Meas: W

7.1.1.4. Operations Security (OPSEC) Vulnerabilities

7.1.1.4.1. Identify OPSEC vulnerabilities associated with the 1C5X1 career field. STS: 6.2.1.1 Meas: W

7.1.1.5. Reference Systems

7.1.1.5.1. Using an X & Y reference system sheet, plot four of six reference system coordinates. STS: 11.12.5 Meas: W/PC

7.1.1.5.2. Using a Polar Grid reference sheet, plot four of six reference system coordinates. STS: 11.12.4 Meas: W/PC

7.1.1.5.3. Using a Latitude and Longitude reference sheet, plot four of six reference system coordinates. STS: 11.12.3 Meas: W/PC

7.1.1.5.4. Using a Geographical Reference System (GEOREF) reference sheet, plot four of six reference system coordinates. STS: 11.12.1 Meas: W/PC

7.1.1.5.5. Using a Military Grid Reference System (MGRS) reference sheet, plot four of six reference system coordinates. STS: 11.12.2 Meas: W/PC

7.1.1.6. Aerospace Control and Warning (AC&W) Systems

7.1.1.6.1. Identify Air Defense Systems. STS: 3.1.1, 3.1.2, 3.1.3, 3.1.4 Meas: W

7.1.1.6.2. Identify unit characteristics within the Theater Air Control System (TACS). STS: 3.1.1 Meas: W

7.1.1.6.3. Identify Modular Control Equipment (MCE) characteristics. STS: 8.1.1, 8.1.2, 8.1.3, 8.1.4, 11.10.2 Meas: W

7.1.1.6.4. Identify CRC section functions. STS: 3.1.1 Meas: W

7.1.1.6.5. Identify CRC position responsibilities. STS: 3.1.1, 11.4.1 Meas: W

7.1.1.6.6. Identify elements of weapons operations. STS: 8.2.3, 8.3.3, 11.4.1, 11.4.2, 11.4.3 Meas: W

7.1.2. **Block II Mission Planning**

7.1.2.1. Mission Planning

7.1.2.1.1. Identify elements of mission planning. STS: 8.2.3, 11.5.1, 11.5.2, 11.5.3, 11.5.5 Meas: W

7.1.2.2 Contingency Theater Automated Planning System (CTAPS)

7.1.2.2.1. Identify basic principles of CTAPS operations. STS: 11.5.1, 11.5.2, 11.5.3, 11.10.3.1, 11.10.3.2 Meas: W

7.1.2.2.2. Using a CTAPS terminal and WB 1C5 1201, prepare the terminal for basic operation with no more than one error and one instructor assist. STS: 11.5.1, 11.5.2, 11.5.3, 11.10.3.1, 11.10.3.2, 11.10.3.3 Meas: W/PC

7.1.2.2.3. Using a CTAPS terminal and WB 1C5 1201, establish communications messages between duty positions with no more than two errors and one instructor assist in each area. STS: 11.5.1, 11.5.2, 11.5.3, 11.10.3.1, 11.10.3.2, 11.10.3.3 Meas: W/PC

7.1.2.2.4. Using a CTAPS terminal and WB 1C5 1201, enter ATO information into the computer data base with no more than two errors and one instructor assist in each area. STS: 11.5.1, 11.5.2, 11.5.3, 11.10.3.1, 11.10.3.2, 11.10.3.3 Meas: W/PC

7.1.3. **Block III System Initialization Procedures**

7.1.3.1. Operator Console Unit (OCU)

7.1.3.1.1. Identify occupational hazards within the 1C531 career field. STS: 7.1 Meas: W

7.1.3.1.2. Using an OCU, prepare the unit for basic operation with no more than two errors and one instructor assist. STS: 7.2.1, 7.2.2, 11.9, 11.10.2, 11.13 Meas: W/PC

7.1.3.1.3. Using an OCU, conduct equipment checks with no more than two errors and one instructor assist. STS: 11.9, 11.10.2, 11.13 Meas: W/PC

7.1.3.2. System Initialization

7.1.3.2.1. Using an OCU, enter System Initialization (SI) information into a data base with no more than two errors and one instructor assist. STS: 9, 10.2, 11.1.1, 11.1.2, 11.10.2, 11.13 Meas: W/PC

7.1.3.3. Communication Procedures

7.1.3.3.1. Identify radio telephone (RT) procedures. STS: 8.3.1, 8.3.2, 8.3.3 Meas: W

7.1.3.3.2. Identify the types of communications jamming. STS: 8.6.1.3 Meas: W

7.1.3.3.3. Identify the authentication procedures used in AC&W operations. STS: 8.4 Meas: W

7.1.3.3.4. Identify characteristics of voice systems. STS: 8.1.5.1, 8.1.5.2 Meas: W

7.1.3.4. Voice Communication

7.1.3.4.1. Using an OCU and Voice Comm VFS, enter communications data into the operational data base, with no more than two errors and one instructor assist. STS: 8.1.6, 11.6.1, 11.6.2, 11.10.2, 11.13 Meas: W/PC

7.1.3.4.2. Using an OCU and VCAU Assignments VFS, assign communications data to the VCAU with no more than two errors and one instructor assist. STS: 8.1.6, 11.6.1, 11.6.2, 11.10.2, 11.13 Meas: W/PC

7.1.3.4.3. Using a VCAU, establish communications with no more than two errors and one instructor assist. STS: 8.1.1, 8.1.2, 8.1.3, 8.1.4, 8.1.6, 8.3.1, 8.3.2, 11.6.1, 11.6.2, 11.10.2 Meas: W/PC

7.1.4. **Block IV Operation Procedures**

7.1.4.1. Radar Fundamentals

7.1.4.1.1. Identify basic radar operations. STS: 10.1 Meas: W

7.1.4.1.2. Identify radar scope displays. STS: 8.6.1.1, 8.6.1.2, 10.1 Meas: W

7.1.4.1.3. Identify characteristics of a surveillance function. STS: 11.2.1.1, 11.2.1.2, 11.2.1.3, 11.2.2.1, 11.2.2.2, 11.2.2.3, 11.2.2.4 Meas: W

7.1.4.2. Hook Data Readout (HDRO) and Modular Control Equipment (MCE) Symbology

7.1.4.2.1. Using an OCU, determine information displayed in the Hook Data Readout (HDRO) areas with no more than one error in each area and one instructor assist. STS: 11.10.2, 11.13 Meas: W/PC

7.1.4.2.2. Using an OCU, identify MCE symbology with no more than three errors and one instructor assist. STS: 11.10.2, 11.13 Meas: W/PC

7.1.4.3. Surveillance Operations

7.1.4.3.1. Using an OCU, perform surveillance functions to maintain tracking continuity on tracks displayed with no more than four errors and one instructor assist. STS: 8.3.1, 8.3.2, 11.2.2.1, 11.2.2.2, 11.2.2.3, 11.10.2, 11.13 Meas: W/PC

7.1.4.3.2. Distinguish characteristics of Identification (ID) functions. STS: 11.3.1, 11.3.2, 11.3.3, 11.3.4 Meas: W

7.1.4.3.3. Using an OCU, perform identification functions with no more than two errors and one instructor assist. STS: 11.2.2.3, 11.3.2, 11.3.3, 11.10.2, 11.13 Meas: W/PC

7.1.4.3.4. Using an OCU, perform manual tracking on one track with no more than two errors and one instructor assist. STS: 8.1.6, 8.3.1, 8.3.2, 11.2.1.1, 11.2.1.2, 11.2.1.3, 11.6.1, 11.10.2 Meas: W/PC

7.1.4.4. Electronic Warfare

7.1.4.4.1. Using an OCU, perform electronic warfare functions with no more than one error and one instructor assist. STS: 8.7, 8.8, 8.9.1.1, 8.9.1.2, 8.9.1.3, 8.10, 8.11 Meas: W/PC

7.1.4.4.2. Using an OCU, perform passive tracking with no more than one error and one instructor assist. STS: 11.2.2.4, 11.10.2, 11.13 Meas: W/PC

7.1.5. **Block V Data Link Operations**

7.1.5.1. Data Links

7.1.5.1.1. Identify types of data links. STS: 8.2.5, 8.5, 11.10.2, 11.13 Meas: W

7.1.5.1.2. Identify Joint Operational Interface characteristics. STS: 8.1.5.4, 8.2.1, 8.2.2, 8.2.3, 8.2.5, 8.2.6.1, 8.2.6.2 Meas: W

7.1.5.2. Data Link Operations

7.1.5.2.1. Using an OCU, perform data link functions to build a TADIL-B circuit with no more than two errors and one instructor assist. STS: 8.2.5, 8.5, 11.10.2, 11.13 Meas: W/PC

7.1.5.2.2. Using an OCU, build data link filters used to adjust the data link picture with no more than two errors and one instructor assist. STS: 8.2.5, 8.5, 11.10.2, 11.13 Meas: W/PC

7.1.5.2.3. Using an OCU, activate a TADIL-B circuit with no more than two errors and one instructor assist. STS: 8.2.5, 8.5, 11.10.2, 11.13 Meas: W/PC

7.1.5.2.4. Using an OCU, identify types of data link tracks with no more than two errors and one instructor assist. STS: 8.2.5, 8.5, 11.10.2, 11.13 Meas: W/PC

7.1.5.2.5. Using an OCU, send/receive data link orders with no more than two errors and one instructor assist. STS: 8.2.5, 8.5, 11.10.2, 11.13 Meas: W/PC

Section C - Support

8. NOTE: There is currently no advanced course. This area is reserved.

Section D - Training Course Index

9. Purpose. This section of the CFETP identifies training courses available for the specialty and shows how the courses are used by each MAJCOM in their career field training programs.

10. Air Force In-Residence Courses.

COURSE NUMBER	TITLE	LOCATION

AIR FORCE IN-RESIDENCE COURSES

COURSE NUMBER	COURSE TITLE	LOCATION
E3ABR1C531 005	Aerospace Control and Warning Systems Apprentice (MCE)	Keesler AFB
Q-JSS-1C531	Apprentice Aerospace Control and Warning(AC&W) Operator (JSS)	Tyndall AFB

W-JSS-1C551D ANGOWD-W- JSS-13B2C	Weapons Director Automated Systems Qualification Training Basic (ASQT) Course	Tyndall AFB
W-MCE-1C551D ANGOWD-W- MCE-13B2D	Modular Control Equipment (MCE) Initial Skills Qualification Training (ISQT) Course	Tyndall AFB

11. Extension Course Institute (ECI) Courses

COURSE NUMBER	COURSE TITLE	USER
CDC 1C551	Aerospace Control and Warning Systems	UNIT

12. Exportable Courses

MOBILE TRAINING TEAM COURSES (MTT)

COURSE NUMBER	TITLE	LOCATION	USER

13. Courses Under Development

E6ACS1C571 000	Aerospace Control and Warning Systems Craftsman	UNIT

Section E - MAJCOM Unique Requirements

NOTE: There are currently no MAJCOM unique requirements. This area is reserved.